Step-by-Step Guidance

GHG Emissions Reporting Using the
California ARB On-Line Reporting Tool

Electricity Generating
and Cogeneration Facilities

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Step-by-Step Guidance for Emissions Reporting
Using the California ARB On-Line Reporting Tool

This guidance was prepared to provide operators of electricity generating and cogeneration facilities step-by-step instructions for reporting their Greenhouse Gas (GHG) emissions using the on-line reporting tool developed by the California Air Resources Board (ARB). As specified within California's Regulation for the Mandatory Reporting of GHG Emissions, operators of electricity generating and cogeneration facilities must report to ARB when

- o They are located in California or operated by a retail provider as defined in section 95102(a), and
- o The individual facility has a total nameplate generating capacity ≥ 1 megawatt (MW) AND emits $\geq 2,500$ metric tonnes of CO2 in any calendar year after 2007 from electricity generating activities.

The reporting requirement includes hybrid generating facilities. In some cases, operators of electricity generating facilities and cogeneration facilities will submit stand-alone reports. In other cases, electricity and cogeneration information will be submitted within the report of a power entity or another reporting sector, such as cement plants, petroleum refineries, hydrogen plants, and general stationary combustion facilities.

This document focuses primarily on the mechanics of entering your emissions and other required data into the on-line GHG reporting tool. A checklist is provided to help ensure complete reporting. Some examples are provided for setting up emitting activities. This reporting tool guidance does not provide instructions for calculating facility emissions, explanation of the regulation, or examples of how to compute emissions. If you identify a source of emissions that is required to be

> NOTE: When the operator of a generating or cogeneration facility is a retail provider or marketer, or the generating or cogeneration facility is within a larger facility also subject to reporting, refer first to the Step-by-Step Guidance for that sector.

reported, but it is unclear how to report the emissions, please contact ARB staff.

For detailed information and compliance assistance, please refer to the main GHG Reporting webpage (http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm). The Instructional Guidance link at the top of the GHG Reporting web page includes detailed information about how to determine if you must report and how to calculate GHG emissions for your facility. Chapters 1-6 describe the overall requirements of the regulation. Chapters 8 and 9 were written specifically to assist electricity generating and cogeneration facility operators

to meet the reporting requirements. The Regulatory Activity link on the main GHG Reporting webpage includes the full text of the regulation.

The following steps may be used as a checklist. In addition, Tables 1-6 are provided to summarize reporting requirements and the respective locations in the tool where you will enter your data. Examples are provided at the end of this document to illustrate Steps 4 and 7- Setting Up Emitting Activities and Reporting Emissions.

Step 1 – Prepare for Reporting
Step 2 – Register
Step 3 – Manage General Facility Information

> ### *Facility Information Module*
Step 4 – Set Up Emitting Activities and Associated Fuels, Feedstocks, and
        Other—Facility Level and Generating Unit Level
Step 5 - Set Up Devices and Associated Fuels, if applicable
Step 6 - Set Up Energy and Production Reporting Categories—Facility Level and
        Generating Unit Level

> ### *Annual Reporting Module*
Step 7 - Report Fuels and Emissions Data for Emitting Activities
Step 8 – Report Device Level Fuel Use, if needed
Step 9 - Report Energy and Production Information

Step 10 – Perform Quality Assurance Checks and Report Certification

Reporting Tool Checklists for
Electricity Generation and Cogeneration Operators

Table 1. Electricity Generation Greenhouse Gas Emissions Data Report: Non-Emissions Data

Emissions Data Report	Reporting Tool Module and Tab	Facility Level	Generating Unit Level
ARB-designated ID number	Facility Information Module→Facility Details tab →prepopulated and →Generating Unit tab auto-generated	X	X
Nameplate generating capacity	Facility Information Module →Facility Details tab and →Generating Unit tab	X	X
Net power generated	Annual Report Module→Energy and Production Submission →Energy Production tab	X	X
Wholesale electricity sales exported directly out-of-state, if known	Annual Report Module→Energy and Production Submission →Energy Provided or Sold tab	X	X

Table 2. Electricity Greenhouse Gas Emissions Data Report: Fuel Information

Emissions Data Report	Reporting Tool Module/Area	Facility Level	Generating Unit Level
Fuel consumption by fuel type at the lowest point of metering	Annual Report Module→Emissions and Fuels Submission →Device Level Fuel Use Data Detail tab	X	
Fuel consumption by fuel type when used in emissions calculations	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X
Average higher heating values by fuel type, if measured	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X
Average carbon content by fuel type, if measured	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X
Facility-specific emission factors, if applicable[1]	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X
Steam production from boilers, if HHV not measured	Annual Report Module→Energy and Production Submission →Steam Production tab	X	

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[1] Facility-specific emission factors include those
- developed or measured by the operator using approved source testing as provided under sections 95125(b)(4) or 95125(h)(3)
- used to calculate CO_2 process emissions from use of acid gas
- used to calculate fugitive CO_2 emissions from geothermal generating facilities.

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Table 3. Electricity Generation Greenhouse Gas Emissions Data Report: Emissions Information

Emissions Data Report	Reporting Tool Module/Area	Facility Level	Generating Unit Level
Stationary combustion emissions by fuel type of CO_2, $CO_{2\text{-biomass}}$, CH_4 and N_2O	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X	X
Process emissions of CO_2 from acid gas scrubbers or acid gas reagent used in the combustion source, if applicable	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X	X (available to be reported at generating unit level—optional)
Fugitive emissions of CH_4 from coal storage for coal-fired facilities	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X	
Fugitive emissions of HFC related to the operation of cooling units that support power generation, if applicable	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X	
Fugitive SF_6 emitted from equipment that is located at the facility and that the operator is responsible for maintaining in proper working order	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X (power entities may report at entity level)	

Table 4. Cogeneration Greenhouse Gas Emissions Data Report: Non-Emissions Data

Emissions Data Report	Reporting Tool Module/Area	Facility Level	Generating Unit Level	Abbreviated Report Requirements
ARB-designated ID number	Facility Information Module→Facility Details Tab →prepopulated and →Generating Unit Tab auto-generated	X	X	X
Nameplate generating capacity	Facility Information Module →Facility Details Tab and →Generating Unit Tab	X	X	X
Net power generated	Annual Report Module→Energy and Production Submission →Energy Production tab	X	X	X
Wholesale electricity sales exported directly out-of-state, if known	Annual Report Module→Energy and Production Submission →Energy Provided or Sold tab	X	X	
Cogeneration system information	Facility Information Module →Generating Unit tab →Cogeneration Info. tab		X	X
Electricity generation and end-use information	Annual Report Module→Energy and Production Submission →Energy Production tab and →Energy Provided or Sold tab	X	X	X
Thermal energy production and end-use information	Annual Report Module→Energy and Production Submission →Energy Production tab and →Energy Provided or Sold tab	X	X	
Indirect energy purchases	Annual Report Module→Energy and Production Submission →Indirect Energy Use tab	X		

Table 5. Cogeneration Greenhouse Gas Emissions Data Report: Fuel Information

Emissions Data Report	Reporting Tool Module/Area	Facility Level	Generating Unit Level	Abbreviated Report Requirements
Fuel consumption by fuel type at the lowest point of metering	Annual Report Module→Emissions and Fuels Submission →Device Level Fuel Use Data Detail tab	X		X
Fuel consumption by fuel type when used in emissions calculations	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X	X
Average higher heating values by fuel type, if measured	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X	
Average carbon content by fuel type, if measured	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X	
Facility-specific emission factors, if applicable[2]	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X	

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[2] Facility-specific emission factors include those
- developed or measured by the operator using approved source testing as provided under sections 95125(b)(4) or 95125(h)(3)
- used to calculate CO_2 process emissions from use of acid gas
- used to calculate fugitive CO_2 emissions from geothermal generating facilities.

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Table 6. Cogeneration Greenhouse Gas Emissions Data Report: Emissions Information

Emissions Data Report	Reporting Tool Module/Area	Facility Level	Generating Unit Level	Abbreviated Report Requirements
Stationary combustion emissions by fuel type of CO_2, $CO_{2\text{-biomass}}$, CH_4 and N_2O	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X	X	X
Process emissions of CO_2 from acid gas scrubbers or acid gas reagent used in the combustion source, if applicable	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X	X (available to be reported at generating unit level—optional)	
Fugitive emissions of CH_4 from coal storage for coal-fired facilities	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X		
Fugitive emissions of HFC related to the operation of cooling units that support power generation, if applicable	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X		
Fugitive SF_6 emitted from equipment that is located at the facility and that the operator is responsible for maintaining in proper working order	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X (power entities may report at entity level)		
Distribution of fossil-fuel-based CO_2 emissions to electricity and thermal energy production as well as manufactured product outputs, if applicable	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab, Calculation Method: Distributed … Precalculated		X	

Step 1
Prepare for Reporting

If you believe you are subject to reporting and did not receive an initial ARB ID and Access code, it is your responsibility to contact ARB at ghgreport@arb.ca.gov to request access to the Reporting Tool.

ARB Facility Lists. As a supplier of electric power, to insure that your facility is properly represented, you should review the lists of generating facilities posted on ARB's website, at http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep-power/ghg-rep-power.htm. In the second year of reporting, the posted lists will also include generating unit ID numbers. You can email ghgreport@arb.ca.gov with corrections. Retail providers and marketers use these lists to report power transactions associated with specified facilities. The lists will be updated frequently to reflect corrections provided by reporters, especially during the first year of reporting.

Facility lists:
- (1) Generating facilities that combust fossil fuels or biomass operated by entities and suppliers who are required to report their GHG emissions to ARB. This list includes some out-of-state facilities that are operated by entities required to report, such as multi-jurisdictional retail providers.
- (2) The second list is generating facilities that use nuclear, hydroelectric, wind, or solar energy.
- (3) The third list is out-of-state generating facilities not already listed. The ARB ID number for out-of-state facilities not required to report to ARB is the same as their EIA number.

Prior to reporting, it will be helpful to collect some basic information needed for reporting. You will be able to log in and return to the tool to complete reporting as needed, so all information does not need to be collected prior to, or entered in, one session. The tool does not have an integrated tracking or "completion" wizard to let you know where you are in the reporting process. Therefore, it will be important to track progress to ensure that all required data are ultimately submitted. The reporting steps and tables above are provided to serve as a checklist.

In addition to gathering information needed for reporting, we also strongly recommend reviewing the brief Reporting Tool Primer (http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgtoolprimer.pdf). Because the design and approach used within the tool may be unfamiliar to some, the *Primer* will give a good orientation to the overall structure and use of the tool.

Also, the full Reporting Tool Users Guide (http://www.arb.ca.gov/cc/reporting/ghg-rep/ghgtoolusersguide.pdf) will be

an important aid for reporting. Finally, for electricity generating and cogeneration reporters, it is important to review the reporting guidance, particularly Chapters 8 and 9, and be familiar with the applicable portions of the regulation.

Information to Gather for Reporting. Below is a partial list of information that will be needed for electricity generating and cogeneration reporters in order to enter data into the reporting tool. Information is required at the *facility level,* the *generating unit level,* or both. Both electricity generating units and cogeneration systems are referred to as "generating units" in the reporting tool. The regulation stipulates that if the facility lacks metering or monitoring equipment that would enable the operator to determine fuel consumption and emissions at the generating unit level, the operator may aggregate generating units that combust the same fuel type, and report information for the group of units as if it were a single generating unit.

a. **Emitting Activities or Sources.** Prepare a list of all stationary combustion, process, and fugitive emissions sources that are subject to reporting.[3] These are referred to as *emitting activities* in the reporting system. Emitting activities are set up at both the facility and generating unit level, as applicable.

b. **Emissions Data.** Gather direct emissions monitoring results (such as CEMS or source test data), fuel characteristic analyses (such as carbon content or higher heating value), or other data needed to calculate and report GHG emissions, as applicable. Where a fuel-based method is used to calculate emissions, the monthly fuel test results must be applied to the monthly fuel consumption to calculate emissions for the report year. Combustion emissions are reported at the facility level and also at the generating unit level.

c. **Fuel Use.** Gather facility level, generating unit level, and device level fuel usage records for each fuel type consumed by stationary combustion. *Device level fuel use*, also referred to as the *lowest point of metering*, is required for each process unit or group of units, in addition to generating units, where fuel use is separately metered. When fuel use is reported in association with emissions that are calculated using a fuel-based method, the fuel measurement must provide at least 95% accuracy. The exception is for fuel use reported in association with *de minimis* emissions. Fuel use reported at the lowest point of metering or "device level" is not required to meet the 95% accuracy requirement.

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[3] The operator shall identify, calculate, and report CO_2, CO_2-biomass, N_2O, CH_4, SF_6, and HFC emissions from stationary combustion, process, and fugitive sources at the facility as specified in sections 95111 and 95112. The operator shall calculate and report each GHG separately for each fuel type used. The operator shall separately identify, calculate and report all direct emissions of CO_2-biomass resulting from combustion of biomass-derived fuels. For power entities, SF_6 may be aggregated at the entity level.

d. **Energy and Production.** Nameplate generating capacity and net power generated are reported at both the facility level and the generating unit level. For cogeneration only, gather information about net electricity and useful thermal energy generated, used on-site, and provided or sold to end-users. Also for cogeneration, gather billing information for purchased electricity.

e. **Wholesale Power Exported Directly Out-Of-State**. The regulation requires that the operator report wholesale power sales that the operator directly exports across the California border, if known. See Chapter 8 of the *Instructional Guidance* for more information.

Step 2
Register

Navigate to the Reporting Tool website from: http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm. From here, there are links to the reporting tool.

2.1 Registration for Facility Manager. If you have not already done so, follow the steps in Section 2.1 of the Reporting Tool Users Guide to register your facility using the facility ARB ID and Access Code mailed to you by ARB. During registration you will input basic facility, contact, and user information further described in Step 3.

Operators of Electric Generating Facilities (Not Retail Providers or Marketers): You will use your facility ARB ID number and Access Code to set up a facility manager with full access to your facility's data and who is authorized to certify the data. If you are a supplier that operates multiple facilities, you will need to use the ARB facility ID number and facility Access Code to set up a facility manager for each facility. The same individual can be facility manager for multiple facilities. A facility manager can create contacts or users and establish them as other facility managers or as facility reporters. The Reporting Tool allows up to two people to be designated as Facility Managers for a facility (or entity). Facility reporters can report data but cannot certify data.

Retail Providers and Marketers: You will use your entity level ARB ID number and Access Code to set up an entity manager with full access to your entity's data who can also certify the data. If you operate electric generating facilities, the entity manager can associate each of these facilities with the entity using the facility ARB ID number and Access Code. The entity manager can create contacts and establish them as entity managers, facility managers, entity reporters, and

facility reporters. The entity manager can allow a facility manager access to multiple facilities by associating that contact with each of the facilities desired. The contacts or users you establish as entity reporters can report entity data and those established as facility reporters can report facility data.

2.2   Registration for Additional Users. Each additional user assigned a role by the facility manager will also register (with the ARB Facility ID and access code) to create a self-defined User ID and password for future access to the reporting system through the log-in procedure.

Once the facility manager and other initial users are registered and user accounts are set up, you will add general information about the facility. Log into your account using your User ID and password. The ARB Facility ID and Access Code used to initially register the account are now only needed for associating users to multiple facilities, when needed.

 You will see there are four phases to completing your GHG Report:
- Manage Facility Information
- Report Annual Data
- Certify Annual Data
- View Reports

Each phase listed is hyperlinked to the associated reporting module. **Steps 3 through 10** describe the first three phases.

Step 3
Manage General Facility Information

Once you select the *Manage Facility Information* link, you will see the list of facilities you are associated with. When you select a facility, you will see the "Facility Information" details page. The following tabs are provided to facilitate your data entry:

(1)   Facility Details
(2)   Addresses
(3)   Geographic Location
(4)   Contacts
(5)   Associated (Power) Entity
(6)   Verification Bodies
(7)   Emitting Activities
(8)   Generating Units
(9)   Devices
(10) Energy and Production
(11) Facility Documents
(12) Facility and Unit Submissions
(13) ARB Notifications

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3.1   Review, Update, and Complete Facility Details. Section 2.1.4 of the *Users Guide* describes how to review or modify address and descriptive information about the facility. Correct any preloaded data, e.g., mailing address, as needed.

  3.1.1   Set Confidential Data Flag, as needed. *Please note: At the bottom of the Facility Details page is a check box for "Preferred Confidential."* By checking this box, you are indicating that some of the information you are providing to ARB may be considered trade secret and protected under existing California statute. If there is a public request for any of this information, ARB will follow the Public Records Act request procedures before sharing with a third party.

  3.1.2   Assign Primary and Secondary Sector(s) for Reporting. In many cases, electricity generating facilities and cogeneration facilities are part of another reporting sector, such as cement plants, petroleum refineries, hydrogen plants, and general stationary combustion facilities. In some cases, operators of electricity generating facilities and cogeneration facilities will submit stand-alone reports. Many facilities will be included in power entity reports.

  The *Facility Details* tab has menus to designate the *Primary Reporting Sector* and *Secondary Reporting Sector(s).* The Reporting Tool may include a preloaded designation for the Primary Reporting Sector. Please verify that this designation is correct and modify as needed to represent the reporting sector you are reporting under.

  Power Entities. Select Electricity Generation as the Primary Reporting Sector for all your generating facilities, unless a particular facility is totally cogeneration. In that case, you should select cogeneration as the primary sector for the facility. If your facility includes both electricity generation and cogeneration, you should select Electricity Generation as the Primary Reporting Sector and select Cogeneration as the Secondary Reporting Sector.

  Third-Party or Contracted Services. In some cases, electricity generating units or cogeneration systems are operated on-site, but under separate operational control, as a service to the primary facility. For these cases in which operational control is provided by a third party or contractor, the Primary Sector will be either Electricity Generation or Cogeneration. If operations

include both, you should select "Electricity Generation" as the *Primary Reporting Sector* and select "Cogeneration" as the *Secondary Reporting Sector*.

Other Reporting Sectors. You may be referred to this document because you have a generating unit (emergency and portable generators are exempt) on your facility, but your primary business is not electricity production. You need to identify your *Primary Sector* as appropriate using the choices provided in the pull down menu. The menu does include "Other" as a choice if nothing else fits your needs. Next, you identify either "Electricity" or "Cogeneration" or both as your *Secondary Sector(s)*.

If the combined generating units at a facility do not meet the reporting threshold specified under sections 95101(b)(4) and 95101(b)(7), but you wish to report electricity or cogeneration within the report of another primary sector, do not designate a *Secondary Sector* and do not set up "generating units." Report as a combustion source and choose an appropriate *Emitting Activity Type*.

3.1.3 Enter Nameplate Generating Capacity. You will report nameplate generating capacity for the facilities and for the generating units that you operate under the *Facility Details* tab and the *Generating Units* tab, respectively.

3.2 Enter Preliminary Information Under the Generating Unit Tab. You will report your *Generating Unit Type(s)* and *Nameplate Generating Capacity* under the *Generating Units* tab. Additional tabs are provided:

- Unit Operating Status (electricity and cogeneration reporters)
- Cogeneration Information (cogeneration reporters only)
- Emitting Activities (described in **Step 4**).

Generating Unit ID Numbers. The reporting tool assigns unit ID# 1 to the first generating unit you set up. It assigns ID #2 to the second unit you report, etc. Since you are setting up your generating units the first year of reporting, the generating unit ID numbers are not yet available to the public. Thus, even though the reporting tool includes all generating facility ID numbers, it will not include unit numbers until the second year of reporting. At that time, ARB will make all the unit numbers available to entities reporting transactions. For now, if an entity is purchasing or taking power from a particular unit, rather than from the facility on whole, the entity will need to request the generating unit ID (as assigned by the reporting tool) number from the supplier in order to accurately associate the power purchased/taken

with the unit. Because the first year of reporting is based on best available data, it is acceptable to associate transactions with the facility only and not with the power unit.

3.2.1   Generating Unit Type. The selection of your generating unit type is related to the primary and secondary sectors you select under the *Facility Details* tab. The following *Types* are available in the Reporting Tool. There are more details on selecting *Unit Type* in Section 3.2.1 and Figure 3.4 of the *Users Guide*.
- Cogeneration Primary Sector – Topping Cycle
- Cogeneration Primary Sector – Bottoming Cycle
- Cogeneration Secondary Sector – Topping Cycle
- Cogeneration Secondary Sector – Bottoming Cycle
- Electric Generating Primary Sector – NOT Cogen
- Electric Generating Secondary Sector – NOT Cogen

3.2.2   Nameplate Generating Capacity. You will report nameplate generating capacity for the facilities and for the generating units that you operate under the *Facility Details* tab and the *Generating Units* tab, respectively.

3.2.3   Cogeneration Information. For cogeneration systems only, you will include cogeneration-specific information under the *Generating Units* tab. After clicking on the *Generating Units* tab, you will see an additional set of tabs. Select the *Cogeneration Information* tab to enter information about your prime mover, heat recovery system, and steam use.

3.3   Provide Physical and Mailing Addresses. Use the Addresses Tab to provide the physical and mailing addresses associated with the facility. Click the *SAVE* button at the bottom of the screen to ensure that your entries are retained. Click the *BACK* button to return to the main pages. See 2.1.4.2 of the *Users Guide*.

3.4   Provide Geographic Location. Use the *Geographic Location* tab to provide the latitude and longitude information for the facility. A publically available website such as http://www.batchgeocode.com/lookup/ will help identify your latitude and longitude, if needed. (Note: This link is provided for information only and no endorsement or assurance of accuracy for the site should be assumed.) An automotive or handheld GPS receiver can also be used to determine latitude and longitude. If needed, Section 2.1.4.3 of the *Users Guide* describes how to use the GoogleMaps link to verify your latitude and longitude. (Note that the Google link will not automatically enter the longitude and latitude into the reporting tool; you must manually enter that information.)

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3.5   Assign Facility Contacts and Users. The facility manager should be the first person to register and provide general facility information. This tab allows you to add other users. You can add another facility manager as well as subordinate staff and consultants as data reporters. Data reporters do not have the ability to certify the data. Section 2.1.4.4 describes how to add additional facility contacts and users and how to end contact relationships with the facility, if needed. The Reporting Tool *Primer* and *Users Guide* further discuss relationships within the tool.

Once you enter the initial information for a new facility contact or user, the Reporting Tool will email that contact a link and additional information about how to access the tool and complete their personal account information.

3.6   Add Facility Documents. The regulation requires that a facility emissions data report include supplemental information about its parent company or related companies (see 95104(a)(8) of the Regulation). This information can be developed in a spreadsheet or other type of document and uploaded into the Reporting Tool. The *Facility Documents* tab described in Section 2.1.4.5 of the *Users Guide* provides instructions on how to add documents to the Reporting Tool.

The *Facility Document* tab may be used to add any type of additional documents that the reporter thinks are appropriate. Please note, that any information provided to ARB becomes part of the emissions data report and could be requested as part of the Public Records Act. Refer back to the *Confidential Data* flag for explanation. Additional information is also provided via the HELP button.

**Structure Facility (Source) Information Module—
Introduction to Steps 4, 5, and 6**

Step 4 – Set Up Emitting Activities and Associated Fuels, Feedstocks, and
      Other—Facility Level and Generating Unit Level
Step 5 - Set Up Devices and Associated Fuels, if applicable
Step 6 - Set Up Energy and Production Reporting Categories—Facility
      Level and Generating Unit Level

One of the key features of the GHG Reporting Tool is that prior to reporting, the tool first needs to be "told" what the relevant data entry fields are. In this way, you are structuring the *Facility (Source) Information Module* to provide the required data entry fields in the *Annual Reporting Module*. The overall structure of emitting activities, fuel monitoring devices, and energy and production categories is retained from year to year, and does not need to be input again unless there are modifications, additions, or deletions. For example, in the first year you set up emitting activities for the sources that are required to be reported. In subsequent years, you will simply report the annual data associated with those previously established emitting activities.

**Step 4
Set Up Emitting Activities and Associated Fuels, Feedstocks, and Other—
Facility Level and Generating Unit Level**

This section provides the steps on how to add emitting activities for your facility. A comprehensive list of *Categories of Emitting Activities* and *Activity Types* is provided in this section. ***Examples are provided at the end of this document to illustrate Steps 4 and 7- Setting Up Emitting Activities and Reporting Emissions for generating units that combust various types of fuels***. These examples provide a conceptual framework. In addition, Section 3 of the *Users Guide* further illustrates the details of setting up emitting activities.

You will set up your emitting activities based on the emissions sources specified in the regulation, common fuels and monitoring considerations, and the calculation methods you are using. Emitting activities may be individual emission sources or aggregations of emission sources. **For electricity generation and cogeneration, emitting activities are reported at two levels: (1) under the facility level *Emissions* tab and (2) under the *Generating Unit* level tab.**

4.1   Generating Unit Level Emitting Activities. You are required to report emissions at the generating unit level. The regulation allows you to aggregate generating units for the purposes of reporting emissions if the facility lacks the necessary metering or monitoring equipment to measure data individually for each generating unit. In the reporting tool, you will set up the aggregation of units like a single generating unit.

You will decide whether or not you want the generating unit level emissions to be summed and added into your facility total emissions. If you do, you will indicate that you want the unit emissions "summed." If not, such as when you use an upstream revenue meter to calculate facility emissions, you will mark the generating unit level emissions as "supplemental." For cogeneration, distributed emissions are reported as "supplemental." *Note that you will not select associated "Fuels, Feedstock, or Other" when setting up emitting activities to report cogeneration distributed emissions.* When reporting distributed emissions in **Step 7**, they will appear as "Remaining Emissions." See Example D at the end of this document.

4.2   Facility Level Emitting Activities. If you report emissions for activities at the facility level that duplicate emissions represented by emitting activities you set up for your generating units, and you mark the facility level emitting activities as "summed," then you should mark your unit level emitting activities as "supplemental." If you chose to have your generating unit emissions "summed" into your facility emissions, then your facility level reporting will be limited to emissions sources other than your generating units. These other sources may be auxiliary boilers, CO_2 process emissions from acid gas scrubbers, and fugitive emissions of SF_6 from facility equipment or HFC from a cooling unit.

Process Emissions. CO_2 process emissions from acid gas scrubbers or addition of acid gas reagent must have the applicable "fuel, feedstock, or other" associated with the emitting activity in this step. This will allow data entry in **Step 7** for applicable "custom factors" and use of the calculation tool. Process emissions can be reported at the generating unit, if preferred.

Fugitive Emissions. Facility operators should set up emitting activities for fugitive emissions of SF_6, HFC, geothermal CO_2, and CH_4 from coal storage at the facility level. Since SF_6 and HFC fugitive emissions are not based on fuel use, do NOT select a fuel when setting up these emitting activities. When you are ready to report emissions for these activities, the reporting tool will provide you with an entry called "remaining emissions."   You will select this entry to report your

fugitive emissions. When setting up fugitive CO_2 emissions from geothermal facilities, you add "Heat from Geothermal Steam/Fluid" from the "Fuels, feedstocks, and other" menu. This will allow data entry in **Step 7** for applicable "custom factors" and use of the calculation tool. When setting up fugitive CH_4 emissions from coal storage, you add the type of coal purchased from the "Fuels, feedstocks, and other" menu. This will allow data entry in **Step 7** for applicable "custom factors" and use of the calculation tool.

4.3   Entity Level Emitting Activities. If you are a retail provider, you may choose to report fugitive SF_6 at the entity level and not report SF_6 at the facility level. Fugitive SF_6 emissions are the only emissions that are reported at the entity level.

4.4   Fuel Summations. Note that when you report fuel usage at the generating unit level and mark the entry "summed," the reporting tool will sum emissions but will NOT sum fuel consumption reported at the unit level. The tool does, however, sum fuel consumption reported for separate emitting activities that have been set up at the facility level and marked "summed."

Step-by-step instructions are provided next for navigating through the cycle of adding emitting activities.

4.5   Click on the Emitting Activities Tab. Note this will be in two places: (1) at the facility level and (2) under the *Generating Units* tab. For your first time in the Reporting Tool, there should be no emitting activities listed under these tabs. In future years, you will see previously added emitting activities.

4.6   Add Emitting Activity. To add an emitting activity, click on the blue Add Emitting Activity button on the bottom of the page as shown in Figure 3-1 of the *Users Guide*. You will then see the screen shown in Figure 3-2. See the beginning of Section 3 of the *Users Guide* for a detailed description of an "emitting activity".

Decision Point for GSCs: Most general stationary combustion sources (GSCs) will aggregate emissions instead of reporting at the equipment level. However, for GSCs that operate electricity generating units or cogeneration systems at their facility that exceed the reporting threshold, additional emitting activities are reported. You will create emitting activities that are consistent with the level of aggregation you want to use for

> **What is an Emitting Activity?**
> An emitting activity includes emissions from sources like natural gas turbines or boilers, an engine burning landfill gas, or process emissions from acid gas scrubbers.

your facility.

4.7 Assign Name to Emitting Activity. In the Emitting Activity Name box, you need to type in a unique name. For example, if you are planning on reporting emissions separately for each boiler, you could enter "Boiler 1," "Boiler 2," et cetera. Or, if you are going to report all your emissions under one category of stationary combustion, you could enter "All Stationary Combustion Sources" as the Emitting Activity Name.

4.8 Select Emitting Activity Category and Activity Type. When you set up your emitting activities, you will need to select an emitting activity "category" and activity "type." ***The following list of categories and types pertains to operators of electricity generating units and cogeneration systems. Limit your choices to these categories and types to the fullest extent possible.*** In the *Emitting Activity Category* pull down menu, you will choose the appropriate category:
- Stationary combustion
- Stationary combustion and process
- Process
- Fugitive

In the Activity Type drop down menu, indicate what type of equipment you are adding or choose multiple sources at the bottom of the list if you are aggregating all stationary sources into one group.

Categories of Emitting Activities and Activity Types

<u>GENERATING UNIT LEVEL</u>

Stationary Combustion

    Generating Unit (ELECTRICITY GENERATION):
        Combined cycle
        Boilers combined with steam turbines
        Combustion turbine engines (e.g., Peakers)
        Reciprocating engines
        Multiple Sources
    Generating Units (COGENERATION):
        Cogeneration to electricity generation
        Cogeneration to manufactured product outputs (Bottoming cycle, only)
        Cogeneration to thermal energy production
        Cogeneration Total
        Duct Burners on Heat Recovery Steam Generation (HRSG)
        Device assoc with Manufacturing (Bottoming cycle, only)

Stationary combustion and process (combination)

        Combined Stationary and Process (CEMS)
        Other

Process Emissions

        Acid Gas Scrubber
        Acid Gas Reagent Injection

<u>FACILITY LEVEL</u>

Stationary Combustion

        Combined cycle
        Boilers combined with steam turbines
        Combustion turbine engines (e.g., Peakers)
        Reciprocating engines
        Cogeneration Total
        Duct Burners on Heat Recovery Steam Generation (HRSG)
        Boilers (use for auxiliary boilers)
        Multiple Sources

Stationary combustion and process (combination)

        Combined Stationary and Process (CEMS)
        Other

Process Emissions

        Acid Gas Scrubber
        Acid Gas Reagent Injection
        Other

Fugitive Emissions

        Chiller/Cooling Unit (HFC)
        Coal Storage
        Equipment Fugitive emissions (use for SF6)
        Geothermal facility Fugitive CO2

4.9   Select Operating Status. In the Status box you will choose operating, unless the equipment was not in operation during the entire reporting year. *All activities that are designated as operating must have emissions reported for them to pass the Reporting Tool QA checks.*

4.10 Select Aggregation Level for Emitting Activity. In the *Aggregation Level* drop down menu, select *summed* to add your emissions associated with this activity to the facility total emissions. You will only select *supplemental* if these emissions are included under another emitting activity or are not required to be separately reported, and are not to be included in the facility total emissions. You will select *optional* for mobile, fugitive or process emission activities for which the regulation does not require reporting. See section 4.4 above for considerations about summation of fuel consumption.

4.11 Add Fuels, Feedstocks, Other for Emitting Activity. Under Available Fuels (Fuels, Feedstocks, or Other), use the arrows to associate the appropriate items with the emitting activity. If you combust multiple fuels, you will need to select and include each of the fuels combusted.

Selecting Type of Natural Gas. The reporting tool includes many choices for natural gas. You should select the natural gas defined for the range of measured high heat value that is appropriate. Do not select "unspecified natural gas" unless you are reporting start-up fuels, fuels consumed in *de minimis* emitting activities, or you have elected to report under the abbreviated reporting option for specified cogeneration facilities. This is because unspecified natural gas is associated with the use of a default CO_2 emission factor. In most cases, the regulation requires that the operators of electricity generating and cogeneration facilities use a more rigorous methodology to calculate CO_2.

SF_6 and Cogeneration Distributed Emissions. Do not include "fuels, feedstocks, or other inputs" for emitting activities set up for SF_6 and cogeneration distributed emissions. More information is provided in **Step 7**.

4.12 SAVE. Click the *SAVE* button at the bottom of the page. If you do not save at this point, all information added for the emitting activity will not be saved.

4.13 Repeat to Include All Emitting Activities. Continue adding *Emitting Activities* as described in sections 4.6 to 4.12 until all the sources of emitting activities for your facility have been entered into the tool. **Emissions and fuel consumption are not reported at this point in the process; only emitting activities are setup.** For more information on

adding and deleting emitting activities please see Section 3.1 of the *Users Guide*.

Step 5
Set Up Devices and Associated Fuels, If Applicable

The regulation requires that you report fuel consumption down to the lowest level of metering, if metered. Emissions reporting is not required at this level of detail, only fuel use. Devices can be retail natural gas fuel meters or other electronic measurement devices that measure fuel or electricity. The regulation also requires that fuel consumption be reported at the generating unit level. Typically, generating units will be the lowest level of fuel metering for those emitting activities. Thus, when you report fuel consumption at the generating unit level, you have met the requirement to report to the lowest meter. You do not need to repeat this information under the *Devices* tab used to report fuel consumption.

If you have lower level fuel meters on emitting activities other than your generating units, you need to report fuel consumption to that lowest level metered. For example, if you set up an emitting activity based on a facility level revenue meter, fuel metered downstream (e.g., for a boiler) must be reported under "devices." If you set up your backup boiler as a separate emitting activity and then report fuel consumption and emissions for that activity, there is no need to duplicate the reporting of fuel consumption for the boiler under the *Devices* tab.

5.1   Assign Devices. As described in Section 3.3 of the *Users Guide*, click on the *Devices* tab to enter device data. Use the *Add Device* button at the bottom of the page to add facility devices.

> **What is a Device?**
> A device is a representation of the last point of fuel metering at a facility. The facility operator determines the number and naming structure to apply to devices to represent the points of fuel metering.

5.2   Enter Device Name. In the Device Name box, enter a unique name for that meter or last point of metering. You can use a main meter if the last point of metering is a revenue meter at the facility boundary. If there are multiple meters which will be included for reporting fuel use, assign them unique names such as Meter 1-Boilers, Meter 2-Dehydrators, Meter 3-General Activities. A meter may service one or multiple emitting sources.

5.3   Report Measurement Method. When you set up devices as your mechanism to report fuel use, you must indicate under *Device Type* whether the fuel usage reported at this measurement point is based on

a meter or another approach. Choose "Other" if you are reporting fuel that is delivered and measured that does not use a meter. For example, if wood waste fuel is delivered to the facility by the weighed truckload, you would choose "Other" as the measurement method.

5.4   Describe Equipment Served. In the *Description* text box, enter text describing what equipment the meter feeds, or in the case of biomass above, indicate that this is facility level biomass delivery by truck. You add devices on this screen by choosing a different *Device Name*, and assigning the fuel information. The amount of fuel monitored by these devices or at this point of fuel monitoring is not entered on this page. At this part of the reporting process, only the configuration of the facility and measurement devices is being defined.

5.5   SAVE. Click the *SAVE* button at the bottom of the page. If you do not save at this point, all information added for the device will not be saved. All of your devices should now appear in the "Device Level Fuel Data Detail" table. The quantity of fuel for each meter is **NOT** used to calculate emissions.

Step 6
Set Up Energy and Production Reporting Categories—
Facility Level and Generating Unit Level

In addition to directly emitting activities, energy and production reporting categories are set up in the *Facility Information Module*. The categories are selected now, in **Step 6** at the facility level. You will report the detailed information later in **Step 9**.

6.1 Select Energy and Production Categories. On the "Facility Information" page, you will see a tab titled, "Energy and Production." Select the following *Energy and Production Reporting Categories* based on which type(s) of unit(s) you operate. If you have both electricity generating units and cogeneration systems, choose all the categories required for each in this step.

Electricity Generation Only (Not Cogeneration):
- Energy Production (Net generation only)
- Energy Provided or Sold (Wholesale Electricity Direct Export only)
- Steam Production (if HHV is not measured)[4]

Cogeneration Only:
- Indirect Energy Use Data (Electricity Purchased)
- Energy Production
- Energy Provided or Sold

6.2 Click on the *Energy Category* titled, "Energy Production."

6.3 Use the arrows to add *Energy Production* to the box on the right.

6.4 If required to report any of the other data categories listed above, repeat steps 6.2-6.3 to add those items to the box on the right hand side of the page.

6.5 SAVE. Click the *SAVE* button at the bottom of the page.

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[4] The regulation requires the operator to report steam if the operator does not measure HHV. From "Energy and Production" you can report steam under the "Steam Production" tab. The exception to this is when the generating unit is cogeneration. For cogeneration, steam is reported under the "Energy Production" tab under "Thermal Energy Production."

Report Annual Data—Introduction to Steps 7, 8, and 9

Step 7 - Report Fuels and Emissions Data for Emitting Activities
Step 8 – Report Device Level Fuel Use, if needed
Step 9 - Report Energy and Production Information

You have now completed the steps to structure the *Facility (Source)*
*Information Module***, which provides the necessary data entry fields in the**
Annual Reporting Module. As mentioned previously, the overall emitting
activity structure is retained from year to year, and does not need to be input
again unless there are modifications, additions, or deletions of emitting
activities. For example, in the first year you set up emitting activities for the
sources that are required to be reported. In subsequent years, typically, you
will simply report the annual data associated with those previously established
emitting activities.

The next series of steps identifies the reporting year, reporting period, report
level (entity, facility, generating unit), and type of submission. To report for
each of the previously entered *Emitting Activities, Fuel Monitoring Devices,*
and *Energy and Production Categories*, hover over *Annual Reporting* on the top
of the page and choose *Create New Submission*. You should see a page titled,
"Select Submission Details." See Figures 5-7A, 5-7B, and 5-7C in the *Users*
Guide.

1. Select Reporting Year. In the Report Year box, select 2008 to submit
   emissions for the year 2008.

2. Reporting Period. The corresponding Reporting Period (1/1 — 12/31 of
   the selected reporting year) will automatically populate.

3. Select Reporting Level. You will cycle through this procedure for
   Generating Unit Level reporting as well as for Facility Level reporting.
   Unless your user account is associated with multiple facilities, only one
   facility will be listed when you view the facility page. Highlight the
   facility (or generating unit) and click *Continue*. See Chapter 5.1 of the
   Users Guide for more detail.

4. Select Submission Type. You will cycle through this procedure to
   report "Fuels and Emissions" and "Energy and Production" information.

5. Select "Fuels and Emissions." In **Step 7**, you will report "Fuels and
   Emissions" for each emitting activity you set up in the *Facility*
   Information Module at both the facility level and the generating unit
   level. In **Step 8**, also under the "Fuels and Emissions" submission type,

you will report device level fuel use (facility level only), if not already included at the lowest level of metering under emitting activities.

6.   Select Energy and Production. After cycling though annual data entry for "Fuels and Emissions," select "Energy and Production" to complete **Step 9**. In **Step 9**, you will report "Energy and Production" information for each energy and production category you set up in the *Facility Information Module* at both the facility level and the generating unit level.

The final step discussed in this document is **Step 10**, Perform Quality Assurance Checks and Report Certification.

Step 7
Report Fuel Use and Emissions Data for Emitting Activities

Examples are provided at the end of this document to illustrate **Steps 4 and 7**-Setting Up Emitting Activities and Reporting Emissions. Tables 7 and 8 below summarize reporting requirements and data entry locations for emissions and associated fuel use.

The Reporting Tool incorporates a recursive approach to entering your emissions data and associated fuel use. After selection of reporting year, reporting period, report level (entity, facility, generating unit), and type of submission (fuels and emissions, you will select your first emitting activity, which was set up in **Step 4**. Next, for stationary combustion emitting activities, you will select a single fuel for the first emitting activity and enter the fuel use, emission factor(s), and other fuel data. Then, for the selected emitting activity/fuel type combination, you choose the emissions calculation method for each pollutant. Enter the emissions directly (pre-calculated) or select a method with a calculation tool provided within the Reporting Tool, as applicable.

When you report emissions, you will select the methodology you used to calculate emissions. The pull down menu provided in the Reporting Tool shows all methods available for a given fuel, feedstock, or other input; however, not all of these methods are allowed for operators of electricity generation and cogeneration facilities. *Note that GSCs and other reporting sectors must use the methods specified for the electric sector when reporting emissions for electricity generating units and cogeneration systems.* Be sure to reference the regulation or ARB *Instructional Guidance* to choose a methodology that meets the reporting requirements. The ARB *Instructional Guidance*, Chapter 8, page 8-20, provides a matrix of methodologies available by fuel type and by greenhouse gas.

Detailed steps are described below for reporting fuel use and emissions. *The steps are repeated for each fuel used by each stationary combustion emitting activity—at the facility level and the generating unit level. You will proceed similarly to report process and fugitive emissions.*

Use of "Remainder Emissions." Note that emitting activities set up for SF_6 and cogeneration distributed emissions do not have associated "fuels, feedstocks, or other inputs." For these emitting activities, you will skip step 7.4 and proceed to step 7.5.

7.1 Select Emitting Activity. After completing the steps above, you will see a page titled, "Review Annual Emissions and Fuel Submission." See Figure 6.1 in the *Users Guide*. On initial entry, you will not see any data displayed on the "grid" in the middle of the page.

Electricity Generation and Generation Facilities
GHG Reporting Tool

7.2   Click on *Report Additional Data* on the bottom left hand side of the page, just below the grid.

7.3   Click on the Emitting Activity for which you want to report emissions. Click *Continue*.

7.4   Enter Fuel Use for Emitting Activity

Table 7 provides a summary of data requirements and the location within the Reporting Tool. Step-by-step instructions follow.

Table 7. Electricity and Cogeneration Greenhouse Gas Emissions Data Report: Fuel Use for Emitting Activities

Emissions Data Report	Reporting Tool Module/Area	Facility Level	Generating Unit Level	COGEN ONLY Abbreviated Report Requirements
Fuel consumption by fuel type when used in emissions calculations	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X	X
Average higher heating values by fuel type, if measured	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X	
Average carbon content by fuel type, if measured	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X	
Facility-specific emission factors, if applicable[5]	Annual Report Module →Emissions and Fuels Submission →Emitting Activity Fuel Data Detail tab	X	X	

7.4.1   Select Fuel. Completing step 7.3 will take you to a page titled, "Activity Fuel Use." The grid on this page displays all the fuels you associated with this activity when you initially set up the emitting activity. For a *boiler*, it may simply be natural gas. For a source with co-firing or a different start-up fuel, you will see multiple fuels listed.

Click on a fuel in the grid to report emissions associated with that

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[5] Facility-specific emission factors include those
   • developed or measured by the operator using approved source testing as provided under sections 95125(b)(4) or 95125(h)(3)
   • used to calculate CO_2 process emissions from use of acid gas
   • used to calculate fugitive CO_2 emissions from geothermal generating facilities.

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fuel for that emitting activity. You will notice that the gray section of the page below is no longer gray, but available for data entry.

7.4.2 Enter Fuel Consumed. For the emitting activity and fuel type selected, enter the quantity of fuel consumed in the units specified. The regulation requires reporting in specified units, depending on whether the fuel is a liquid, solid, or gas.

7.4.3 Select and Enter Fuel Characteristics and Custom Factors.

CO_2 Default Emission Factor and Default Higher Heating Value (HHV). You can choose the default factors for CO_2 estimation only when reporting *de minimis* emissions and emissions associated with start-up fuels. Specified cogeneration operators who choose the abbreviated report option also may use this method. This method is specified in 95125(a) of the regulation and built into the calculation tool described below.

N_2O and CH_4 Default Emission Factors and Default Higher Heating Value (HHV). Default values for N_2O and CH_4 are available (see method specified in section 95125(b) of the regulation) and may be selected for use in the calculation tool described below.

Default Emission Factor for Fugitive CH_4 from Coal Storage. Enter the amount purchased during the report year of the particular kind of coal you associated with this emitting activity in Step 4. Check "default emission factor" for CH_4. The tool will calculate fugitive CH_4 in step 7.5.

Annual High Heat Values (HHV) and Carbon Content. The regulation requires electricity generating and cogeneration operators to report annual average high heat value or carbon content by fuel type when the respective fuel-based method is used to calculate emissions. Report these values here, as applicable. If the operator does measure high heat value using one of the methods in section 95125(c)(1)(A)-(C), but is not using a fuel-based methodology to calculate emissions, the operator has the option to report either annual average high heat value or steam production but does not need to report both.
If HHV is not available, the operator must report annual steam production instead, under the *Energy and Production* submission type in **Step 9**. Note: These values are not used to calculate emissions in step 7.5. You will select a "pre-calculated" method in step 7.5 which will not use the calculation tool described below.

Custom Factors for CO_2 Process and Fugitive Emissions. Custom factors used in the calculation tools follow the same format outlined in the regulation formulas.

> CO_2 Process Emissions. For acid gas scrubbers or acid gas reagent injection, you enter the amount of limestone or other sorbent used during the report year, a value for "R" (ratio of moles of CO_2 released upon capture of one mole of acid gas), and a value for "$Sorbent_{MW}$" (molecular weight of the sorbent). Then, in the next screen, the calculator within the reporting tool calculates CO_2 process emissions for you.

> CO_2 Fugitive Emissions from Geothermal Facilities. Similarly, you can enter a custom factor for "heat" (heat taken from geothermal steam and/or fluid) to allow the reporting tool to calculate fugitive CO_2 emissions from geothermal facilities.

Custom Factors for ARB-Approved Source Tests. You will report customized emission factors here from source tests for facilities that combust biomass and waste-derived fuels and for geothermal facilities, but you will not use a calculator. Emission factors developed or measured by the operator using approved source testing, as provided under sections 95125(b)(4) or 95125(h)(3), are reported in specified units. When reporting emissions from source test data, you will select a "pre-calculated" methodology in step 7.5. Supporting documentation for your source testing can be included at the tab titled, "Supporting Documentation" in your *Emissions and Fuels* submission.

Calculators. There are several calculators within the reporting tool that can be utilized with the default and custom factors described above:
- default CO_2 emissions factor and HHV under limited circumstances
- default N_2O and CH_4 emission factors and HHV
- fugitive CH_4 from coal storage
- CO_2 process emissions from acid gas scrubbers or acid gas reagent injection
- fugitive CO_2 from geothermal facilities.

If other methods are used to calculate emissions for the emitting activity, they are directly entered on the *Emissions Data* pages as described in the steps starting at 7.5.

7.4.4 SAVE. Click *SAVE*. You will notice that the grid refreshes and now includes emission factors for CO_2, CH_4, and N_2O, as applicable, for that fuel.

At this point, the most linear path is to click on the *Report Emissions* button as described next, in Step 7.5, and then cycle back through additional fuels, if applicable. If you combust additional fuels for this emitting activity, you can continue entering the fuel use and fuel characteristics reported under the emitting activity by using the *Back* button.

7.5   Enter Emissions Data for each Emitting Activity and Fuel Type

Table 8 provides a summary of data requirements and the location within the Reporting Tool. Step-by-step instructions follow.

Table 8. Electricity and Cogeneration Greenhouse Gas Emissions Data Report: Emissions Data for Selected Emitting Activity and Fuel Type

Emissions Data Report	Reporting Tool Module/Area	Facility Level	Generating Unit Level	COGEN ONLY Abbreviated Report Requirements
Stationary combustion emissions by fuel type of CO_2, $CO_{2-biomass}$, CH_4 and N_2O	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X	X	X
Process emissions of CO_2 from acid gas scrubbers or acid gas reagent used in the combustion source, if applicable	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X	X (available to be reported at generating unit level—optional)	
Fugitive emissions of CH_4 from coal storage for coal-fired facilities	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X		
Fugitive emissions of HFC related to the operation of cooling units that support power generation, if applicable	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X		
Fugitive SF_6 emitted from equipment that is located at the facility and that the operator is responsible for maintaining in proper working order	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab	X (power entities may report at entity level)		
COGENERATION ONLY Distribution of fossil-fuel-based CO_2 emissions to electricity and thermal energy production as well as manufactured product outputs, if applicable	Annual Report Module →Emissions and Fuels Submission →Emissions Data Detail tab, Calculation Method: Distributed … Precalculated		X	

7.5.1   Select the Fuel Type for Emissions Reporting. Click to highlight the fuel you just saved on the previous *Activity Fuel Use* page. "Remainder Emissions" will be displayed instead of a fuel type for emitting activities not associated with a fuel type, such as SF_6 and cogeneration distributed emissions. Next, click *Report Emissions*

at the bottom of the page. The next page will be titled, "Report Emissions." This page should look like Figure 6-11 of the *Users Guide*.

7.5.2   Select Reporting Method for Emissions. In the middle of the page is a table with CO_2, CH_4, and N_2O tabs across the top. If a biomass-derived fuel is associated with the emitting activity, an additional tab labeled Biomass CO_2 will appear.

Calculation Tool. For example, working under the CO_2 tab, you will choose the reporting method. You can choose the first method in the list titled, "Default Emission Factor and Default Heat Content CO_2 (95125(a)) – Calculation Tool" only when reporting *de minimis* emissions and emissions associated with start-up fuels. Specified cogeneration operators who choose the abbreviated report option may use this method.

When you choose a method that includes a calculation tool, the general formula and then the complete formula for calculating emissions will appear below the *Method* box.

Pre-calculated Methods. If you are calculating the emissions outside of the tool for the emitting activity and selected "fuel, feedstock, or other," select one of the pre-calculated methods associated with the relevant section of the regulation. A data entry field is provided to enter the calculated emissions directly into the Reporting Tool.

7.5.3   Select Emissions for Reporting. Click on the *Report Emissions* selection box on this tab for CO_2 on the upper right hand corner of the window. See Figure 6-12 of the *Users Guide*. **If this box is not checked, the emissions will not be included in the emissions total.**

Following checking the *Report Emissions* box, a new grid will appear at the bottom of the page, displaying the calculated values for that gas.

7.5.4   *De Miminis* Designation. If you choose to designate any of the emissions associated with a specific emitting activity and fuel as *de minimis*, check the *de minimis* box provided for each of the gases, shown under each of the GHG tabs, as shown in Figure 6-12 of the *Users Guide*, below the comment box.

7.5.5   Add Additional Gases – Add Emissions and Methods for Each Gas for the Selected Fuel and Emitting Activity. For the selected fuel

and emitting activity, return to step 7.5.2, and select the appropriate tabs for CO_2, N_2O, CH_4, or Biomass CO_2, as required. Follow the steps provided for reporting the emissions and calculation method for each gas.

7.5.6 SAVE and Review Emissions Entries. Look at the "Review Results" grid at the bottom of the page (see Figure 6-14 of the *Users Guide*). Once all of the input emissions data are shown for each of the gases entered for the selected fuel type and emitting activity, click SAVE. *If save is not selected, the entered data and selections will not be retained.*

7.6 Add Emissions for Additional Fuels, Feedstock, or Other for Selected Emitting Activity, as needed. If there are additional fuels associated with the selected emitting activity, hit the *Back* button. This will return to the screen which allows selection of additional fuels for the emitting activity.

Returning to step 7.4, select another fuel type associated with the emitting activity and report the emissions data and methods used for each of the fuels and associated emissions. Repeat this step until emissions are reported for each fuel reported under the emitting activity. See Figure 13 in the *Primer* for an illustration of this data entry cycle for fuel use, emission factors, estimation approach, and emissions using the reporting tool.

7.7 Complete Fuel Use and Emissions Entry for All Emitting Activities. Repeat for every emitting activity you set up at both the facility level and the generating unit level and for each "Fuel, feedstock, or other" associated with that activity.

To report for the next emitting activity, select the appropriate emitting activity from the *Review Annual Emissions and Fuels Submission* page (see Figure 6-16 in the *Users Guide*). If not on this page, a shortcut is to first select the *Facility* tab in blue at the top of the page. Select your facility. Next click the *Facility* and *Unit* submissions tab in the middle of the page, click the link for the *Submissions ID* for the "Emissions and Fuels" submission type. This should bring you to the page showing all of the emitting activities created for the facility in **Step 4**. Choose the next emitting activity (Figure 6-16) and report emissions for all fuels associated with this next emitting activity.

Step 8
Report Device Level Fuel Use, If Needed

Table 9. Electricity and Cogeneration Greenhouse Gas Emissions Data Report: Device Level Fuel Use

Emissions Data Report	Reporting Tool Module/Area	Facility Level	Generating Unit Level	COGENERATION ONLY Abbreviated Report Requirements
Fuel consumption by fuel type at the lowest point of metering	Annual Report Module→Emissions and Fuels Submission →Device Level Fuel Use Data Detail tab	X		X

8.1   Report Fuel Throughput for Meters. Once you have completed entering the emissions associated with emitting activities, you must next report fuel throughput at the last point of metering, where applicable for the facility. If needed, you would have set up and defined these devices in 4.2.

8.2   Click on Facility at the top of the page, click on your facility, click on the Facilities and Unit Submissions tab in the middle of the page, click the Submissions ID of your facility for Emissions and Fuels, click the red tab "Device Level Fuel Use Data Detail".

8.3   Click Report Additional Data at the bottom left hand side of the page. See Figure 6-17 of the *Users Guide*.

8.4   Enter Device Fuel Data. You should be on a page titled, "Add Device Level Fuel Data." See Figure 6-18 of the *Users Guide* for more detail.

8.5   At the bottom of the page you will see a box with the title, "Report Fuel Use." In the drop down menu for device name, you should see any unique names you had set up. Select the first one.

8.6   Select the fuel that was measured by that device. The fuel type was already input when creating each emitting activity, but you make the selection again for device fuel use reporting. You can also add additional fuels for the device here.

8.7   After selecting the fuel, enter the quantity measured at that point.

8.8   Enter any comments and then click *SAVE*. At this point the grid above will be populated with the data you just entered for that device.

8.9   Repeat steps 8.5 through 8.8 for each device or last point of metering you set up previously.

Step 9
Report Energy and Production Information

After cycling though annual data entry for "Fuels and Emissions," select "Energy and Production" to complete **Step 9**. In **Step 9,** you will report "Energy and Production" information for each energy and production category you set up in the *Facility Information Module.*

Tabs for Electricity Generation Only (Not Cogeneration):
•   Energy Production (Net generation only, Generating Unit Level only)
•   Energy Provided or Sold (Wholesale Electricity Direct Export only
•   Steam Production (if HHV is not measured, Facility Level only)
•   Supporting Documentation

Tabs for Cogeneration Only:
•   Indirect Energy Use Data (Electricity Purchased, Facility Level only)
•   Energy Production
•   Energy Provided or Sold
•   Supporting Documentation

Table 10 summarizes the information reported and the location of the data entry fields in the Reporting Tool. Some types of information are reported at the facility level, at the generating unit level, or both.

Table 10. Electricity and Cogeneration Greenhouse Gas Emissions Data Report: Energy and Production Information

Emissions Data Report	Reporting Tool Module/Area	Facility Level	Generating Unit Level	COGEN ONLY Abbreviated Report Requirements
Net power generated	Annual Report Module→Energy and Production Submission →*Energy Production* tab	X	X	X
Wholesale electricity sales exported directly out-of-state, if known	Annual Report Module→Energy and Production Submission →*Energy Provided or Sold* tab	X	X	
ELECTRICITY ONLY Steam production from boilers, if HHV not measured	Annual Report Module→Energy and Production Submission →*Steam Production* tab	X		
COGENERATION ONLY Electricity generation and end-use information	Annual Report Module→Energy and Production Submission →*Energy Production* tab and →*Energy Provided or Sold* tab	X	X	X
COGENERATION ONLY Thermal energy production and end-use information	Annual Report Module→Energy and Production Submission →*Energy Production* tab and →*Energy Provided or Sold* tab	X	X	
COGENERATION ONLY Indirect energy purchases	Annual Report Module→Energy and Production Submission →*Indirect Energy Use* tab	X		

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More detailed guidance is provided below for
- Energy Production
- Energy Provided or Sold
- Indirect Energy Use Data (Cogeneration only).

The other categories follow the same pattern.

9.1   Enter Energy Production Data. For each generating unit (electricity generating unit and cogeneration system), enter net power generated in MWh.

For cogeneration only, enter the following information for each generating unit:
- Electricity consumed on-site, MWh
- Efficiency of electricity generation, %, if known[6]
- Total useful thermal output, MMBtu
- Amount of thermal output consumed on-site, MMBtu
- Efficiency of thermal energy production, %, if known
- Input steam to steam turbine, if measured, MMBtu
- Output of Heat Recovery Steam Generator (HRSG)
- Supplemental fuel fired in duct burner(s) of HRSG(s)

Be sure to scroll down to view the last few data entry fields and SAVE.

9.2   Enter Energy Provided or Sold Data.
9.2.1   For Electricity Generation, including Cogeneration, Report Wholesale Electricity Direct Exports, if applicable. The regulation requires facility operators to report exports of power, if known. You can report direct exports from a facility under the "Energy Provided or Sold" tab. Retail providers and marketers do not report data here; instead, they should report exports as an entity submittal using the customized template for power transactions.

9.2.2   For Cogeneration Only, Select Each Additional *Energy Category*, as applicable. Cycle through the data entry for each applicable category:
- Thermal Energy Provided or Sold
- Electricity Provided or Sold
- Total Wholesale Electricity Sold

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[6] The efficiency of electricity generation is calculated using equations specified in the ARB Reporting Regulation. If the parameters in the relevant equation are known, the efficiency is calculated and entered here.

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9.3   Cogeneration Only, Facility Level Indirect Energy. You will report electricity purchased and consumed and your energy provider under "Indirect Energy Use."

9.3.1   Follow all of the steps in the introduction to the *Annual Reporting Module* (Click on *Annual Reporting*, *Create New Submission*, etc.), but this time select *Energy and Production* under the *Submission Type*. Click *continue*.

> Note: All of the tabs for identifying and setting up emitting activities (Step 4) are accessible by clicking on the word "Facility" at the top left of the main reporting page. To change to reporting emissions for each of these entered activities, select "Annual Reporting" on the top of the page and choose "Report Annual Data."

9.3.2   Next, select your facility and click *continue*.

9.3.3   You should already be on the *Indirect Energy* tab in the middle of the page. Click *add* below that grid. This will take you to a *Report Data* page. See Figure 7-1 of the *Users Guide* for a screenshot.

9.3.4   Under *Select Category*, choose *indirect*. (That should already be chosen as the default.)

9.3.5   Under *Energy Type*, choose *electricity* or *thermal*.

9.3.6   Enter the quantity bought and used.

9.3.7   You can use the *Select Entity* button to bring up a list of retail providers and see if yours is on the list. You can also use *Select Facility*, if you bought from a particular facility.

9.3.8   If you are not able to find your energy supplier on the lists provided through the *Select Facility* or *Select Entity* buttons, enter the name manually. If you know the EIA number, please enter that also.

9.3.9   Click SAVE. If you do not save, information added during these steps will not be retained.

Step 10
Perform Quality Assurance Checks and Report Certification

10.1   There are two separate steps for certification: Certifying Fuels and Emissions data, and Certifying Energy and Production data.

Navigate to the Facility and Unit Submissions tab: Click on *Facility* at the top of the page, click on your facility, click on the *Facilities and Unit Submissions* tab in the middle of the page. Here you will see IDs for *Fuels and Emissions* data and another ID for *Energy and Production* data.

10.2   Click the ID for the emissions and fuels row. You will now be on a page titled, "Review Annual Emissions and Fuels Submission." These are all of the emitting activities for which you reported emissions.

10.3   Click *Review Submission QA Checks* at the bottom of the page.

10.4   The next page will provide any warnings or errors associated with your fuels and emissions data submittal. You should review carefully to see if the tool has identified any errors you made in your data entries. Also review the checklist provided, the regulation, and your printed reports to assure your report is complete and accurate.

10.5   If you have no 'Critical' errors, the tool will allow you to click *Ready for Certification* at the bottom of the page. This indicates to a facility manager that they should consider the data complete for fuels and emissions, review and then certify before the applicable reporting deadline.

10.6   Once you click *Ready for Certification*, the Annual Reporting page will load. Next, select the *Energy and Production Data* row by clicking on it and follow steps 10.3-10.5 above to indicate this data is also ready for certification by the facility manager. This is a two-step process. Make sure you certify both sets of data. See Section 9.0 of the *Users Guide* for more details about QA checks and changing the status to Ready for Certification.

**Examples to Illustrate Steps 4 and 7-
Setting Up Emitting Activities and Reporting Emissions**

You will set up your emitting activities based on the emissions sources specified in the regulation, common fuels and monitoring considerations, and the calculation methods you are using. The following examples demonstrate how to set up emitting activities and then report emissions for generating units that combust various types of fuels. These examples provide a conceptual framework. You can refer to the *Users Guide* for more detailed instructions.

Examples Provided:
A: CO_2 Emissions for Generating Unit with Continuous Emissions Monitoring System (CEMS) that Combusts Coal
B: CO_2 Emissions for Generating Unit with CEMS and Co-fired with Natural Gas and Biomass
C: CO_2, N_2O, and CH_4 Emissions for Generating Unit that Combusts Municipal Solid Waste
D: CO_2 Emissions for a Topping Cycle Cogeneration Unit

Example A:
CO2 Emissions for Generating Unit with Continuous Emissions Monitoring System (CEMS)
that Combusts Coal

Electric generating unit #1 combusts coal. The unit has CEMS and an acid gas scrubber. The CEMS data enables you to calculate CO2 from combusting coal combined with CO2 from the acid gas scrubber. Since you are not required to report the process CO2 emissions for the acid gas scrubber separately, you can set up one emitting activity. In this example, the aggregation level selected is "summed" which means the emissions reported for the emitting activity at the generating unit level will be added into facility level total emissions.

Emitting Activity for Unit #1

Emitting Activity Name:
Unit #1 Coal Unit with Acid Gas Scrubber
Emitting Activity Category: Stationary Combustion and Process (combination)
Activity Type: Boiler
Status: Operating
Aggregation Level: Summed
Available Fuels (Fuels, Feedstocks, or Other):
Coal (Anthracite), Fuel

Emissions for Emitting Activity for Unit #1

Select emitting activity:
"Unit #1 Coal Unit with Acid Gas Scrubber"
Select fuel: "Coal (Anthracite), Fuel."
Select Tab named "CO2 (Carbon Dioxide)"
Check box for Report Emissions: X
Select calculation method from pull down menu:
"CEMS 95125 (g) pre-calculated"
Enter Emissions: Enter your pre-calculated number
(Note: You enter pre-calculated total emissions based on the CEMS methodology which includes CO2 emissions from the acid gas scrubber)

Example B:
CO2 Emissions for Generating Unit with CEMS and Co-fired with Natural Gas and Biomass

Electric generating unit #2 combusts both natural gas and biomass. The unit has CEMS. Since you are required to report emissions by fuel type, you will set up one emitting activity and select two fuels—natural gas and biomass. You report CO2 emissions from natural gas using the fuel-based methodology 95125(c).   To calculate the biomass related emissions, you use the CEMS methodology in 95125(g) to determine total CO2 emissions and then subtract the fossil fuel emissions. When you report CO2 emissions from the biomass, you will select "CO2 (Carbon Dioxide Biomass)" so that the emissions are identified as biomass-derived.

You will report fuel consumption for both natural gas and biomass even though you did not need to know the amount of biomass combusted in order to determine biomass emissions. There are two reasons for this. First, you are required to report fuel consumption by fuel type. Second, when you report N2O and CH4 emissions from combustion, you can use the built-in calculation tool if you have first entered the amount of fuel combusted for each fuel type and checked the default emission factors for N2O and CH4.

In this example, the aggregation level selected is "summed" which means the emissions reported for these two emitting activities at the generating unit level will be reflected in facility level total emissions.

Emitting Activity for Unit #2

Emitting Activity Name:
Unit #2 Natural Gas and Biomass Unit with CEMS
Emitting Activity Category: Stationary Combustion
Activity Type: Boiler
Status: Operating
Aggregation Level: Summed
Available Fuels (Fuels, Feedstocks, or Other):
Natural Gas (1050 to 1075 Btu/Std cubic foot), Fuel
Biomass Fuel

CO2 Emissions (natural gas) for Emitting Activity for Unit #2

Select emitting activity:
"Unit #2 Natural Gas and Biomass Unit with CEMS"
Select fuel: "Natural Gas (1050 to 1075 Btu/Std cubic foot), Fuel."
Select Tab named "CO2 (Carbon Dioxide)"
Check box for Report Emissions: X
Select calculation method from pull down menu:
"Measured Heat Content CO2 (95125(c)) – Pre-Calculated"
Enter Emissions: Enter your pre-calculated number
(Note: You use a fuel-based method to determine emissions from the natural gas.)

CO2 Emissions (biomass) for Emitting Activity for Unit #2

Select emitting activity:
"Unit #2 Natural Gas and Biomass Unit with CEMS"
Select fuel: "Biomass Fuel"
Select Tab named "CO2 (Carbon Dioxide **Biomass**)"
Check box for Report Emissions: X
Select calculation method from pull down menu:
"Continuous Emissions Monitoring System (CEMS) CO2 (95125(g)) – Pre-Calculated"
Enter Emissions: Enter pre-calculated emissions
(Note: You enter total emissions based on CEMS methodology minus the fossil fuel related emissions.)

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Example C:
CO2, N2O, and CH4 Emissions for Generating Unit that Combusts Municipal Solid Waste

Electric generating unit #3 combusts municipal solid waste. The unit does not have a CEMS system. The operator used the methodology in section 95125(h)(1) of the regulation to calculate total CO2 emissions. Since the unit combusts MSW, the operator must report the biomass-derived portion of the fuel separately using the methodology in section 95125(h)(2).

Thus, the operator must report emissions associated with fossil fuels separately from emissions associated with biomass-derived fuels. The operator must also report N2O and CH4 from the combustion of the MSW fuel. The reporter sets up three emitting activities. One activity is to report fossil fuel related CO2 emissions from MSW, one is for biomass-derived CO2 emissions from MSW, and a third is for N2O and CH4 emissions from the MSW fuel.

The activity to report fossil fuel related CO2 emissions is associated with the method, "Biomass, MSW, or Waste Derived Fuel with Biomass CO2 (95125(h)) – Pre-Calculated," because emissions are based on total emissions minus the biomass-derived portion of emissions. The activity to report the biomass-derived portion of emissions is associated with this method because emissions are based on the biomass percentage of total emissions. The emitting activity to report N2O and CH4 is associated with the method, "Default emission factor and default heat content CH4 (95125(b)(3)) – Calculation Tool." The operator checks "summed" for all emitting activities so that the emissions will be reflected in facility totals.

Emitting Activity for Unit #3 for fossil fuel CO2 emissions

Emitting Activity Name: Unit #3 MSW Unit – fossil fuel CO2 emissions **Emitting Activity Category**: Stationary Combustion **Activity Type:** Boiler **Status:** Operating **Aggregation Level:** Summed **Available Fuels (Fuels, Feedstocks, or Other):** Municipal Solid Waste (MSW), Fuel

Emitting Activity for Unit #3 for biomass-derived CO2 emissions

Emitting Activity Name: Unit #3 MSW Unit – biomass-derived CO2 emissions **Emitting Activity Category**: Stationary Combustion **Activity Type:** Boiler **Status:** Operating **Aggregation Level:** Summed **Available Fuels (Fuels, Feedstocks, or Other):** Biomass Derived Fuels (Solid)

Emitting Activity for Unit #3 for MSW N2O and CH4 emissions

Emitting Activity Name: Unit #3 MSW Unit – N2O and CH4 emissions **Emitting Activity Category**: Stationary Combustion **Activity Type:** Boiler **Status:** Operating **Aggregation Level:** Summed **Available Fuels (Fuels, Feedstocks, or Other):** Municipal Solid Waste (MSW), Fuel

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Example C Continued:
CO2, N2O, and CH4 Emissions for Generating Unit that Combusts Municipal Solid Waste

CO2 Emissions (MSW – fossil fuel portion) for Emitting Activity for Unit #3

Select emitting activity: "Unit #3 MSW Unit – fossil fuel CO2 emissions" **Select fuel**: "Municipal Solid Waste (MSW), Fuel." **Select Tab** named "CO2 (Carbon Dioxide)" **Check box for Report Emissions**: X **Select calculation method from pull down menu**: "Biomass, MSW, or Waste Derived Fuel with Biomass CO2 (95125(h)) – Pre-Calculated" **Enter Emissions**: Enter your pre-calculated number (Note: You use the steam based method in 95125(h)(1) to determine total emissions from MSW but report only the fossil fuel related portion determined using ASTM D6866-06a.)

CO2 Emissions (MSW – biomass portion) for Emitting Activity for Unit #3

Select emitting activity: "Unit #3 MSW Unit – biomass-derived CO2 emissions" **Select fuel**: "Biomass Derived Fuels (Solid)" **Select Tab** named "CO2 (Carbon Dioxide **Biomass**)" **Check box for Report Emissions**: X **Select calculation method from pull down menu**: "Biomass, MSW, or Waste Derived Fuel with Biomass CO2 (95125(h)) – Pre-Calculated" **Enter Emissions**: Enter pre-calculated emissions (Note: You enter the portion of total CO2 emissions associated with biomass-derived fuel determined using ASTM D6866-06a.)

Reporting CH4 Emissions for Emitting Activity for Unit #3

Select emitting activity: "Unit #3 MSW Unit – N2O and CH4 emissions" **Select fuel**: "Municipal Solid Waste (MSW), Fuel" **Select Tab** named "CH4 (Methane)" **Check box for Report Emissions**: X **Select calculation method from pull down menu**: "Default emission factor and default heat content CH4 (95125(b)(3)) – Calculation Tool" **Enter Emissions**: The on-line reporting tool will calculate emissions

Reporting N2O Emissions for Emitting Activity for Unit #3

Select emitting activity: "Unit #3 MSW Unit – N2O and CH4 emissions" **Select fuel**: "Municipal Solid Waste (MSW), Fuel" **Select Tab** named "N2O (Nitrous oxide)" **Check box for Report Emissions**: X **Select calculation method from pull down menu**: "Default emission factor and default heat content CH4 (95125(b)(3)) – Calculation Tool" **Enter Emissions**: The on-line reporting tool will calculate emissions

Example D:
CO2 Emissions for a Topping Cycle Cogeneration Unit

Unit #4 combusts natural gas and is a cogeneration topping cycle unit. The regulation requires the operator to report total CO2 emissions for the unit and also distributed CO2 emissions associated with electricity and thermal energy production. The emitting activities are set up under the generating units tab. The operator sets up three emitting activities to report CO2 emissions—one for total CO2 emissions, one for distributed emissions associated with electricity generation, and one for distributed emissions associated with thermal energy production. The total emissions are checked "summed" to be included in facility total emissions. The distributed emissions are checked "supplemental" emissions so that they are not reflected in the facility totals.

Emitting Activity for Unit #4 for Total CO2 emissions

Emitting Activity Name:
Unit #4 NG Cogen – Total CO2 Emissions
Emitting Activity Category: Stationary Combustion
Activity Type: Cogeneration Total
Status: Operating
Aggregation Level: Summed
Available Fuels (Fuels, Feedstocks, or Other):
Natural Gas (1050 to 1075 Btu/Std cubic foot), Fuel

Emitting Activity for Unit #4 for Distributed CO2 Emissions to Electricity Generation

Emitting Activity Name:
Unit #4 NG Cogen - Distributed CO2 emissions to electricity
Emitting Activity Category: Stationary Combustion
Activity Type: Cogeneration to Electricity Generation
Status: Operating
Aggregation Level: Supplemental
Available Fuels (Fuels, Feedstocks, or Other): Leave blank. Do not select fuel.

Emitting Activity for Unit #4 for Distributed CO2 emissions to Thermal Energy Production

Emitting Activity Name:
Unit #4 NG Cogen – Distributed CO2 emissions to thermal
Emitting Activity Category: Stationary Combustion
Activity Type: Cogeneration to Thermal Energy Production
Status: Operating
Aggregation Level: Supplemental
Available Fuels (Fuels, Feedstocks, or Other): Leave blank. Do not select fuel.

Total CO2 Emissions for Emitting Activity for Unit #4

Select emitting activity:
"Unit #4 NG Cogen – Total CO2 Emissions"
Select fuel: "Natural Gas (1050 to 1075 Btu/Std cubic foot), Fuel"
Select Tab named "CO2 (Carbon Dioxide)"
Check box for Report Emissions: X
Select calculation method from pull down menu:
"Measured Heat Content CO2 (95125(c)) – Pre-Calculated"
Enter Emissions: Enter your pre-calculated number

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Example D Continued:
CO2 Emissions for a Topping Cycle Cogeneration Unit

Distributed CO2 Emissions to Electricity Unit #4

Select emitting activity:
"Unit #4 NG Cogen – Distributed CO2 emissions to electricity"
Select fuel: "Remaining Emissions"
Select Tab named "CO2 (Carbon Dioxide)"
Check box for Report Emissions: X
Select calculation method from pull down menu:
"Distributed Topping Cycle CO2 (95112(b)) – Pre-Calculated"
Enter Emissions: Enter your pre-calculated number

Distributed CO2 Emissions to Thermal Energy Unit #4

Select emitting activity:
"Unit #4 NG Cogen – Distributed CO2 emissions to thermal"
Select fuel: "Remaining Emissions"
Select Tab named "CO2 (Carbon Dioxide)"
Check box for Report Emissions: X
Select calculation method from pull down menu:
"Distributed Topping Cycle CO2 (95112(b)) – Pre-Calculated"
Enter Emissions: Enter your pre-calculated number